

## ABSTRACT

5        A wide variety of reactions can be advantageously affected  
and directed by a spectral catalyst which duplicates the  
electromagnetic energy spectral pattern of a physical catalyst  
and when applied to a reaction system transfers a quanta of  
energy in the form of electromagnetic energy to control and/or  
10      promote the reaction system. The spectral catalysts utilized  
in this invention can replace and/or augment the energy  
normally provided to the reaction system by a physical  
catalyst. A spectral catalyst may also act as both a positive  
catalyst to increase the rate of a reaction or as a negative  
15      catalyst to decrease the rate of reaction.